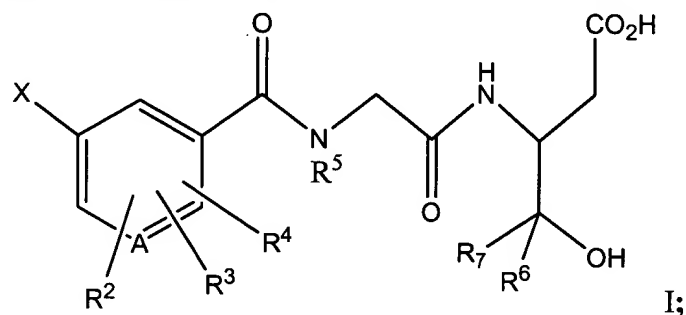


**Amended Claims**

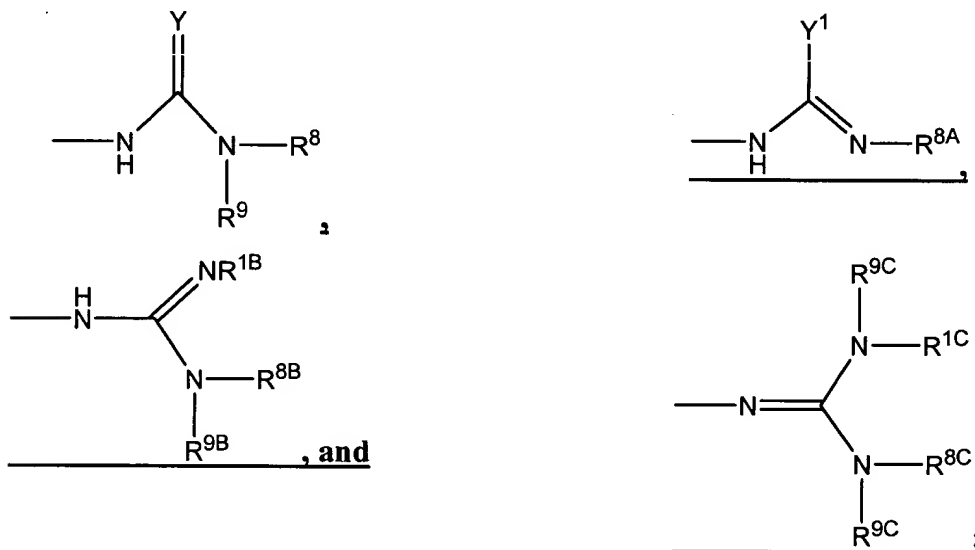
1. (currently amended) A compound; an isomer, enantiomer, tautomer, racemate, or polymorph of the compound; or a pharmaceutically acceptable salt of the compound, isomer, enantiomer, tautomer, racemate, or polymorph, wherein: [[of]]

the compound corresponds in structure to Formula I:



~~or a pharmaceutically acceptable salt thereof wherein:~~

X is selected from the group consisting of:



Y is selected from the group consisting of N-R<sup>1</sup>, O, and S;

A is selected from the group consisting of N [[or C]] and CH;

when Y is N-R<sup>1</sup>:

R<sup>1</sup> and taken together with R<sup>8</sup>, together with the atoms to which they are bonded, form: [[forms]]

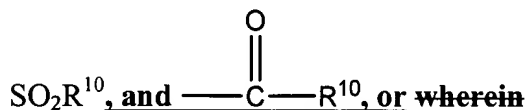
a 4-12 membered dinitrogen containing heterocycle optionally substituted with one or more substituents ~~substituent~~ selected from the group consisting of lower alkyl, hydroxy, keto, alkoxy, halo, phenyl, amino, carboxyl or carboxyl ester, and fused phenyl; ~~or R<sup>1</sup> taken together with R<sup>8</sup> forms~~

a 5 membered heteroaromatic ring optionally substituted with one or more substituents ~~substituent~~ selected from the group consisting of lower alkyl, phenyl, and hydroxy; ~~or R<sup>1</sup> taken together with R<sup>8</sup> forms~~

a 5 membered heteroaromatic ring fused with a phenyl group; and

R<sup>9</sup> is selected from the group consisting of H, alkyl, alkenyl, alkynyl, aralkyl, amino, alkylamino, hydroxy, alkoxy, arylamino, amido, alkylcarbonyl, arylcarbonyl, alkoxycarbonyl, aryloxy, aryloxycarbonyl, haloalkylcarbonyl, haloalkoxycarbonyl, alkylthiocarbonyl, arylthiocarbonyl, acyloxymethoxycarbonyl, cycloalkyl, bicycloalkyl, aryl, acyl, benzoyl, alkyl optionally substituted with one or more substituents ~~substituent~~ selected from the group consisting of lower alkyl, halogen, hydroxy, haloalkyl, cyano, nitro, carboxyl derivatives, amino, alkoxy, thio, alkylthio, sulfonyl, aryl, aralkyl, aryl optionally substituted with one or more substituents ~~substituent~~ selected from the group consisting of halogen, haloalkyl, lower alkyl, alkoxy, methylenedioxy, ethylenedioxy, alkylthio, haloalkylthio, thio, hydroxy, cyano, nitro, carboxyl derivatives, aryloxy, amido, acylamino, amino, alkylamino, dialkylamino, trifluoroalkoxy, trifluoromethyl, sulfonyl, alkylsulfonyl, haloalkylsulfonyl, sulfonic acid, sulfonamide, aryl, fused aryl, monocyclic heterocycles, fused monocyclic heterocycles, aryl optionally substituted with one or more substituents ~~substituent~~ selected from the group consisting of halogen, haloalkyl, lower alkyl, alkoxy, methylenedioxy, ethylenedioxy, alkylthio, haloalkylthio, thio, hydroxy, cyano, nitro, carboxyl derivatives, aryloxy, amido, acylamino, amino, alkylamino, dialkylamino, trifluoroalkoxy,

trifluoromethylsulfonyl, alkylsulfonyl, sulfonic acid, sulfonamide, aryl, fused aryl, monocyclic heterocycles, or fused monocyclic heterocycles, monocyclic heterocycles optionally substituted with one or more substituents ~~substituent~~ selected from the group consisting of halogen, haloalkyl, lower alkyl, alkoxy, aryloxy, amino, nitro, hydroxy, carboxyl derivatives, cyano, alkylthio, alkylsulfonyl, aryl, fused aryl, monocyclic and bicyclic heterocyclicalkyls, -



when Y is O or S:

R<sup>9</sup> and R<sup>8</sup>, together with the nitrogen to which they are bonded, form a 4-12 membered mononitrogen containing monocyclic or bicyclic ring, wherein the ring:

optionally is substituted with one or more substituents selected from the group consisting of lower alkyl, carboxyl derivatives, aryl, and hydroxy, and optionally contains an additional heteroatom selected from the group consisting of O, N, and S;

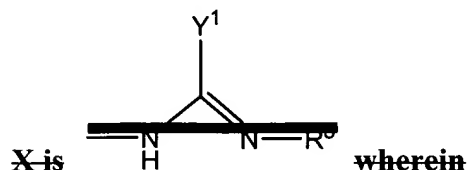
R<sup>10</sup> is selected from the group consisting of alkyl, aryl, and monocyclic heterocycles, wherein: [[all]]

any such substituent is optionally substituted with one or more substituents ~~substituent~~ selected from the group consisting of halogen, haloalkyl, alkyl, alkoxy, cyano, nitro, amino, acylamino, trifluoroalkyl, amido, alkylaminosulfonyl, alkylsulfonyl, alkylsulfonylamino, alkylamino, dialkylamino, trifluoromethylthio, trifluoroalkoxy, trifluoromethylsulfonyl, aryl, aryloxy, thio, alkylthio, and monocyclic heterocycles;



~~NR<sup>8</sup> and R<sup>9</sup> taken together form a 4-12 membered mononitrogen containing monocyclic or bicyclic ring optionally substituted with one or more substituent selected from lower alkyl,~~

~~carboxyl derivatives, aryl or hydroxy and wherein said ring optionally contains a heteroatom selected from the group consisting of O, N, and S; or~~



as to Y<sup>1</sup>:

~~Y<sup>1</sup> is selected from the group consisting of alkyl, cycloalkyl, bicycloalkyl, aryl, monocyclic heterocycles, alkyl optionally substituted with aryl which can also be optionally substituted with one or more substituent selected from halogen, haloalkyl, alkyl, nitro, hydroxy, alkoxy, aryloxy, aryl, or fused aryl, aryl optionally substituted with one or more substituent selected from halogen, haloalkyl, hydroxy, alkoxy, aryloxy, aryl, fused aryl, nitro, methylenedioxy, ethylenedioxy, or alkyl, alkynyl, alkenyl, -S-R<sup>11</sup> and -OR<sup>11</sup> wherein R<sup>11</sup> is selected from the group consisting of H, alkyl, aralkyl, aryl, alkenyl, and alkynyl, or~~

Y<sup>1</sup> is carbon such that Y<sup>1</sup> and R<sup>8A</sup>, together with the atoms to which they are bonded, form a 4-12 membered mononitrogen or dinitrogen containing ring optionally substituted with alkyl, aryl, keto, or hydroxy;

as to R<sup>11</sup>:

~~R<sup>11</sup> and R<sup>8A</sup>, [[taken]] together with [[R<sup>8</sup>]] the atoms to which they are bonded, form [[forms]] a 4-12 membered mononitrogen and monosulfur or monooxygen containing heterocyclic ring optionally substituted with a substituent selected from the group consisting of lower alkyl, hydroxy, keto, phenyl, carboxyl, [[or]] carboxyl ester, and fused phenyl, or~~

R<sup>11</sup> and R<sup>8A</sup>, [[taken]] together with the atoms to which they are bonded, form [[R<sup>8</sup> is]] thiazole, oxazole, benzoxazole, or benzothiazole; [[or]]

as to R<sup>8A</sup>:

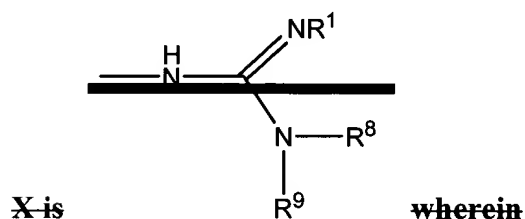
R<sup>8A</sup> and R<sup>11</sup>, together with the atoms to which they are bonded, form a 4-12 membered mononitrogen heterocyclic ring optionally substituted with

a substituent selected from the group consisting of lower alkyl, hydroxy, keto, phenyl, carboxyl, carboxyl ester, and fused phenyl,

$R^{8A}$  and  $R^{11}$ , together with the atoms to which they are bonded, form thiazole, oxazole, benzoxazole, or benzothiazole; or

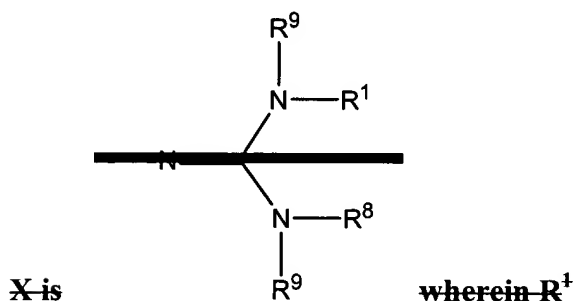
$R^{8A}$  and  $Y^1$  (when  $Y^1$  is carbon), together with the atoms to which they are bonded, form a 4-12 membered mononitrogen or dinitrogen containing ring optionally substituted with alkyl, aryl, keto, or hydroxy;

~~$Y^1$  (when  $Y^1$  is carbon) taken together with  $R^8$  forms a 4-12 membered mononitrogen or dinitrogen containing ring optionally substituted with alkyl, aryl, keto or hydroxy; or~~



$R^{1B}$  [ $R^1$ ] and  $R^{8B}$ ,  $R^8$  taken together with the atoms to which they are bonded, form a 5-8 membered dinitrogen containing heterocycle optionally substituted with one or more substituents ~~substituent~~ selected from the group consisting of lower alkyl, hydroxy, keto, phenyl, and ~~[[or]]~~ carboxyl derivatives; and  ~~$R^9$~~

$R^{9B}$  is selected from the group consisting of alkylcarbonyl, arylcarbonyl, alkoxycarbonyl, aryloxy carbonyl, haloalkylcarbonyl, haloalkoxycarbonyl, alkylthiocarbonyl, arylthiocarbonyl, and ~~[[or]]~~ acyloxymethoxycarbonyl; ~~[[or]]~~



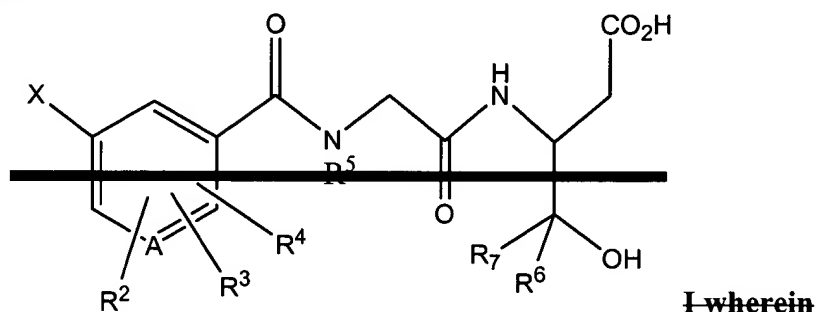
$R^{1C}$  and  $R^{8C}$ ,  $R^8$  taken together with the atoms to which they are bonded, form a 5-8 membered dinitrogen containing heterocycle optionally substituted with hydroxy, keto, phenyl, or alkyl; ~~[[and]]~~

each R<sup>9C</sup> is R<sup>9</sup>~~are both~~ selected from the group consisting of alkylcarbonyl, arylcarbonyl, alkoxycarbonyl, aryloxy carbonyl, haloalkylcarbonyl, haloalkoxycarbonyl, alkylthiocarbonyl, arylthiocarbonyl, and acyloxymethoxycarbonyl;

R<sup>2</sup>, R<sup>3</sup>, and R<sup>4</sup> are independently ~~selected from~~ one or more substituents ~~substituent~~ selected from the group consisting of H, alkyl, hydroxy, alkoxy, aryloxy, halogen, haloalkyl, haloalkoxy, nitro, amino, alkylamino, acylamino, dialkylamino, cyano, alkylthio, alkylsulfonyl, carboxyl derivatives, trihaloacetamide, acetamide, aryl, fused aryl, cycloalkyl, thio, monocyclic heterocycles, fused monocyclic heterocycles, and X, ~~wherein X is defined as above;~~ and

R<sup>5</sup>, R<sup>6</sup>, and R<sup>7</sup> are independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, carboxyl derivatives, haloalkyl, cycloalkyl, monocyclic heterocycles, monocyclic heterocycles optionally substituted with alkyl, halogen, haloalkyl, cyano, hydroxy, aryl, fused aryl, nitro, alkoxy, aryloxy, alkylsulfonyl, arylsulfonyl, sulfonamide, thio, alkylthio, carboxyl derivatives, amino, amido, alkyl optionally substituted with one or more of halogen, haloalkyl, hydroxy, alkoxy, aryloxy, thio, alkylthio, alkynyl, alkenyl, arylthio, alkylsulfoxide, alkylsulfonyl, arylsulfoxide, arylsulfonyl, cyano, nitro, amino, alkylamino, dialkylamino, alkylsulfonamide, arylsulfonamide, acylamide, carboxyl derivatives, sulfonamide, sulfonic acid, phosphonic acid derivatives, phosphinic acid derivatives, aryl, arylthio, arylsulfoxide, or arylsulfone all optionally substituted on the aryl ring with halogen, alkyl, haloalkyl, cyano, nitro, hydroxy, carboxyl derivatives, alkoxy, aryloxy, amino, alkylamino, dialkylamino, amido, aryl, fused aryl, monocyclic heterocycles, and fused monocyclic heterocycles, monocyclic heterocyclic thio, monocyclic heterocyclic sulfoxide, and monocyclic heterocyclic sulfone, which can be optionally substituted with halogen, haloalkyl, nitro, hydroxy, alkoxy, fused aryl, or alkyl, alkylcarbonyl, haloalkylcarbonyl, and arylcarbonyl, aryl optionally substituted in one or more positions with halogen, haloalkyl, alkyl, alkoxy, aryloxy, methylenedioxy, ethylenedioxy, alkylthio, haloalkylthio, thio, hydroxy, cyano, nitro, acyloxy, carboxyl derivatives, carboxyalkoxy, amido, acylamino, amino, alkylamino, dialkylamino, trifluoroalkoxy, trifluoromethylsulfonyl, alkylsulfonyl, sulfonic acid, sulfonamide, aryl, fused aryl, monocyclic heterocycles, and fused monocyclic monocyclic heterocycles; ~~and all isomers, enantiomers, tautomers, racemates and polymorphs thereof.~~

2. (currently amended) A compound, isomer, enantiomer, tautomer, racemate, polymorph, or salt according to claim 1, wherein:

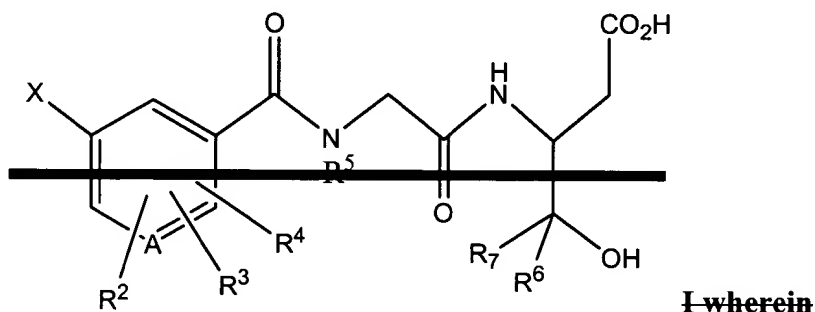


$R^5$  is [[and  $R^6 =$ ]] H;

$R^6$  is H; and

$R^7$  is selected from the group consisting of [[=]] H; alkyl, haloalkyl, carboxyalkyl, alkenyl, alkynyl, and phenyl, optionally substituted with one or more halogen atom.

3. (currently amended) A compound, isomer, enantiomer, tautomer, racemate, polymorph, or salt according to claim 1, wherein:

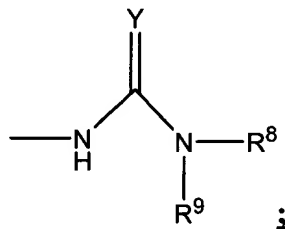


$R^2$  is,  $R^3$ , and  $R^4$  are H, OH, or haloalkyl;

$R^3$  is H, OH, or haloalkyl;

$R^4$  is H, OH, or haloalkyl;

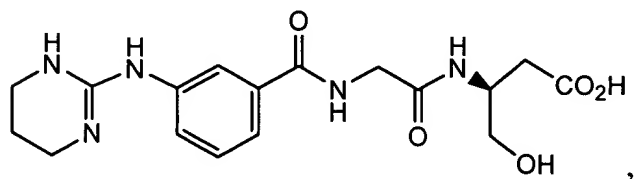
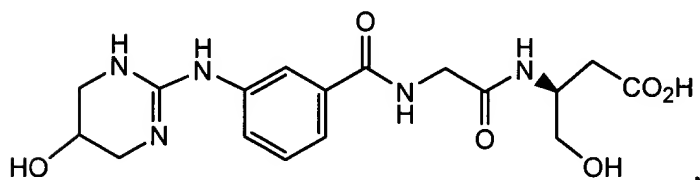
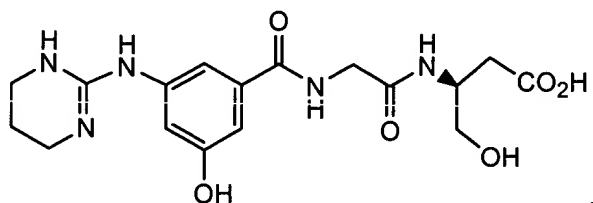
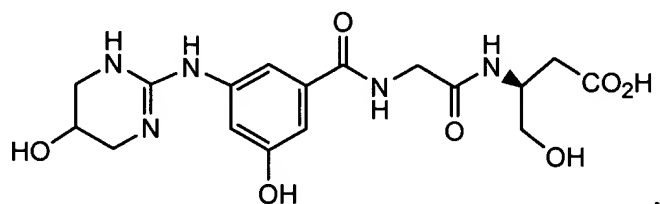
X is:



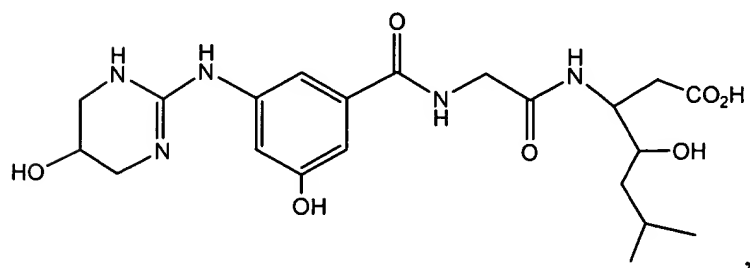
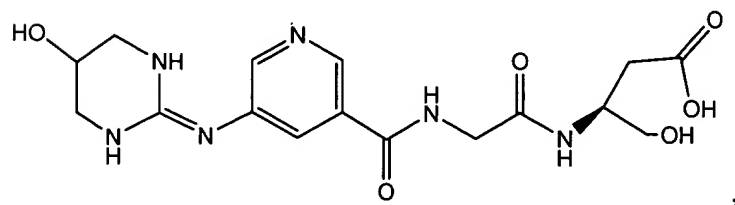
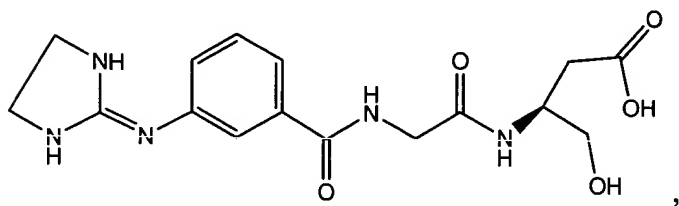
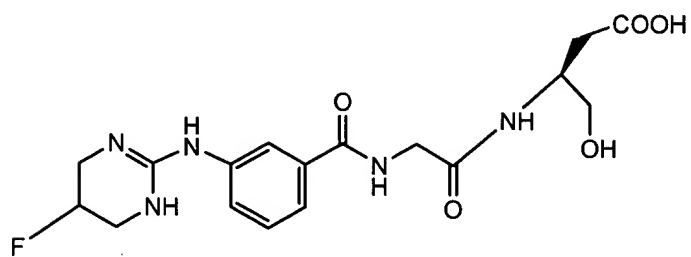
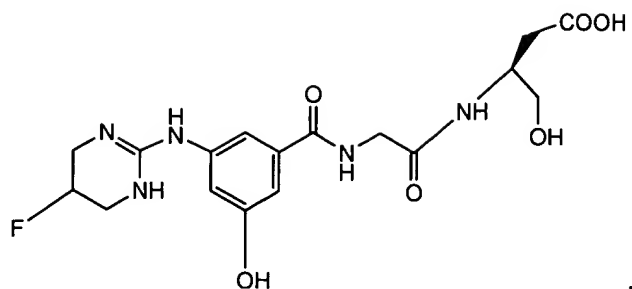
Y is N- $R^1$ ; and wherein

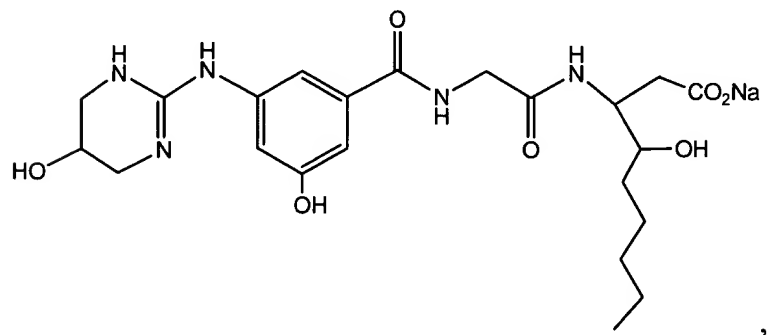
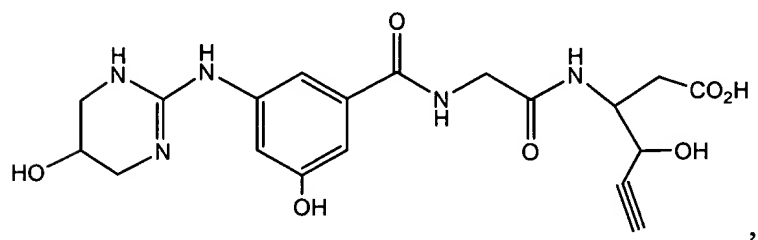
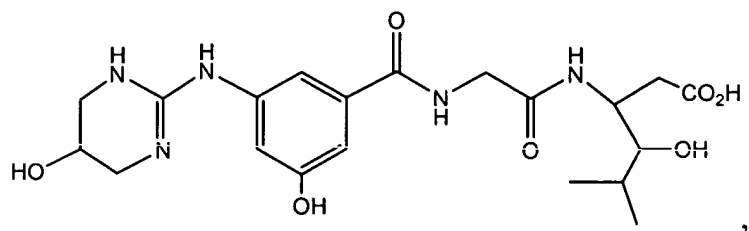
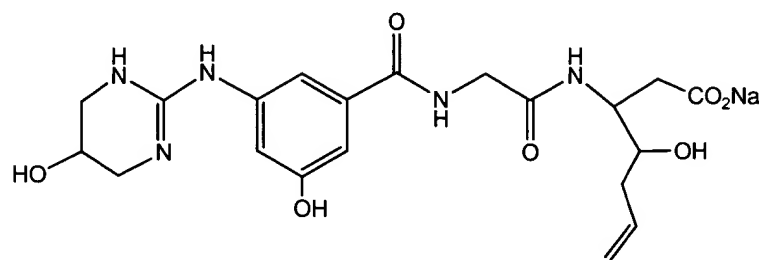
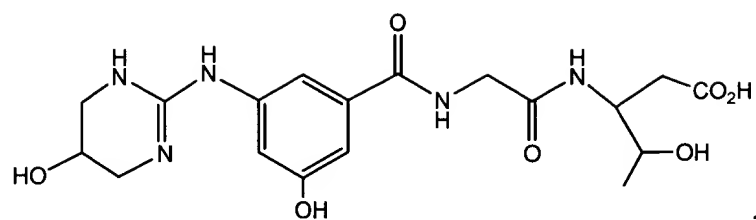
R<sup>1</sup> taken together with R<sup>8</sup> forms a 4-12 membered dinitrogen containing heterocycle optionally substituted with one or more substituents ~~substituent~~ selected from the group consisting of lower alkyl, hydroxy, keto, alkoxy, halogen, phenyl, amino, carboxyl or carboxyl ester, and fused phenyl.

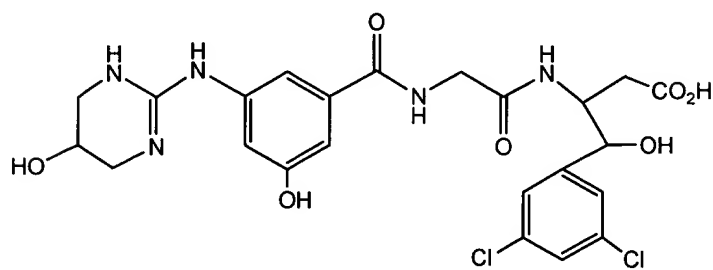
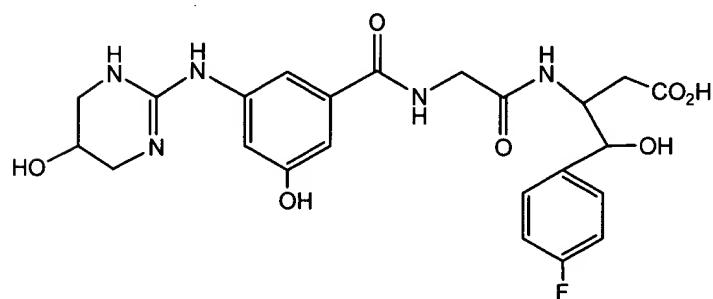
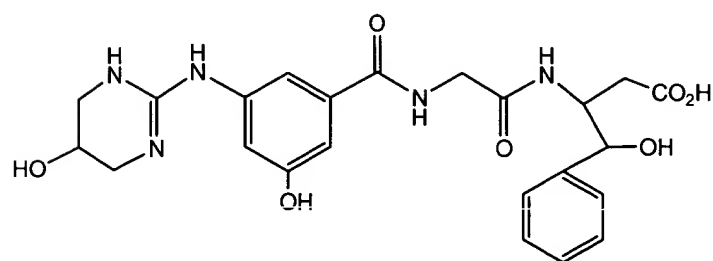
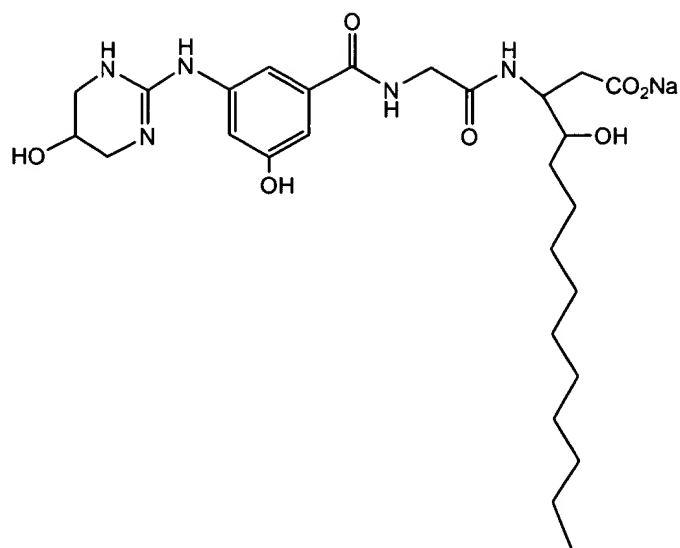
4. (currently amended) A compound, isomer, enantiomer, tautomer, racemate, polymorph, or salt, wherein the compound is selected from the group consisting of:

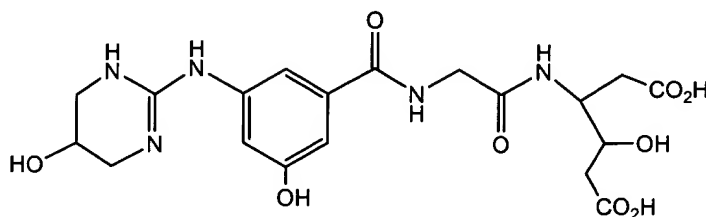
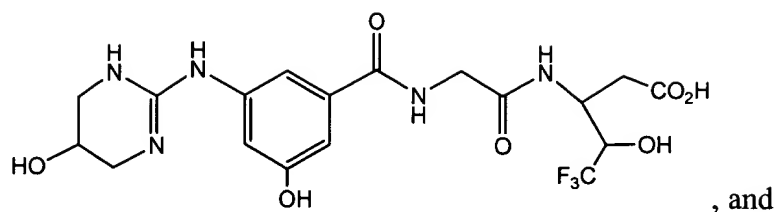












**~~and all the isomers, enantiomers, tautomers, racemates and polymorphs thereof.~~**

5. **(currently amended)** A composition useful in treating ~~or preventing~~ pathological conditions mediated by the  $\alpha_v\beta_3$  or  $\alpha_v\beta_5$  integrin ~~receptors~~ receptor in a mammal, the composition comprising a compound, isomer, enantiomer, tautomer, racemate, polymorph, or salt of Claim 1.

6. **(currently amended)** A method of inhibiting a pathological condition mediated by the  $\alpha_v\beta_3$  or  $\alpha_v\beta_5$  integrin receptor in a mammal, wherein the method comprises ~~comprising~~ administering ~~a therapeutically effective amount of~~ a compound, isomer, enantiomer, tautomer, racemate, polymorph, or salt of Claim 1 ~~, 2, 3, or 4 to the mammal under~~ conditions effective to antagonize  $\alpha_v\beta_3$  or  $\alpha_v\beta_5$  integrin.

7. **(currently amended)** The method according to Claim 6, wherein the condition treated is selected from the group consisting of tumor metastasis, solid tumor growth, tumor angiogenesis, osteoporosis, humoral hypercalcemia of malignancy, smooth muscle cell migration, restenosis, ~~atherosecelosis~~ atherosclerosis, macular degeneration, retinopathy, and arthritis.

**Please add the following new claims:**

8. **(new)** A composition useful in treating pathological conditions mediated by the  $\alpha_v\beta_3$  or  $\alpha_v\beta_5$  integrin receptor in a mammal, the composition comprising a compound, isomer, enantiomer, tautomer, racemate, polymorph, or salt of Claim 2.
9. **(new)** A composition useful in treating pathological conditions mediated by the  $\alpha_v\beta_3$  or  $\alpha_v\beta_5$  integrin receptor in a mammal, the composition comprising a compound, isomer, enantiomer, tautomer, racemate, polymorph, or salt of Claim 3.
10. **(new)** A composition useful in treating pathological conditions mediated by the  $\alpha_v\beta_3$  or  $\alpha_v\beta_5$  integrin receptor in a mammal, the composition comprising a compound, isomer, enantiomer, tautomer, racemate, polymorph, or salt of Claim 4.
11. **(new)** A method of inhibiting a pathological condition mediated by the  $\alpha_v\beta_3$  or  $\alpha_v\beta_5$  integrin receptor in a mammal, wherein the method comprises administering a compound, isomer, enantiomer, tautomer, racemate, polymorph, or salt of Claim 2 to the mammal under conditions effective to antagonize  $\alpha_v\beta_3$  or  $\alpha_v\beta_5$  integrin.
12. **(new)** The method according to Claim 11, wherein the condition treated is selected from the group consisting of tumor metastasis, solid tumor growth, tumor angiogenesis, osteoporosis, humoral hypercalcemia of malignancy, smooth muscle cell migration, restenosis, atherosclerosis, macular degeneration, retinopathy, and arthritis.
13. **(new)** A method of inhibiting a pathological condition mediated by the  $\alpha_v\beta_3$  or  $\alpha_v\beta_5$  integrin receptor in a mammal, wherein the method comprises administering a compound, isomer, enantiomer, tautomer, racemate, polymorph, or salt of Claim 3 to the mammal under conditions effective to antagonize  $\alpha_v\beta_3$  or  $\alpha_v\beta_5$  integrin.

14. **(new)** The method according to Claim 13, wherein the condition treated is selected from the group consisting of tumor metastasis, solid tumor growth, tumor angiogenesis, osteoporosis, humoral hypercalcemia of malignancy, smooth muscle cell migration, restenosis, atherosclerosis, macular degeneration, retinopathy, and arthritis.

15. **(new)** A method of inhibiting a pathological condition mediated by the  $\alpha_v\beta_3$  or  $\alpha_v\beta_5$  integrin receptor in a mammal, wherein the method comprises administering a compound, isomer, enantiomer, tautomer, racemate, polymorph, or salt of Claim 4 to the mammal under conditions effective to antagonize  $\alpha_v\beta_3$  or  $\alpha_v\beta_5$  integrin.

16. **(new)** The method according to Claim 15, wherein the condition treated is selected from the group consisting of tumor metastasis, solid tumor growth, tumor angiogenesis, osteoporosis, humoral hypercalcemia of malignancy, smooth muscle cell migration, restenosis, atherosclerosis, macular degeneration, retinopathy, and arthritis.